

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE  
BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: Xiaoding MA, et al.

Application Serial No.: 10/776,223

Group Art Unit: 1795

Filed : 02/12/2004

Examiner: McDonald, R.

Confirmation No: 3136

Title : GRANULAR MAGNETIC RECORDING MEDIA WITH  
IMPROVED CORROSION RESISTANCE BY PRE-CARBON OVERCOAT ION  
ETCHING

REPLY BRIEF

Commissioner for Patents  
P.O Box 1450  
Alexandria, VA 22313-1450

Sir:

This Reply Brief is submitted in response to Examiner's Answer mailed 6/19/2009. The Primary Examiner's rejection of claims 1-3, 6-14, 26, 28-40, and 42 is the subject of the pending appeal. An Oral Hearing is not being requested.

**STATUS OF CLAIMS**

1. Claims canceled: 4-5, 15-25, 27, and 41.
2. Claims withdrawn from consideration, but not canceled: none.
3. Claims pending: 1-3, 6-14, 26, 28-40, and 42.
4. Claims allowed: none.
5. Claims rejected: 1-3, 6-14, 26, 28-40, and 42.
6. Claims on appeal: 1-3, 6-14, 26, 28-40, and 42.

**GROUND'S OF REJECTION TO BE REVIEWED ON APPEAL**

A. Claims 1, 2, 6-8, 11-14, 26, 28, 29, 31, 32, 35, 37-40, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 7,067,206 to Uwazumi et al. ("Uwazumi") in view of U.S. Patent No. 4,888,211 to Oka et al. ("Oka").

B. Claims 3, 30, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uwazumi in view of Oka, and further in view of U.S. Patent No. 6,432,563 to Zou et al. ("Zou").

C. Claims 9, 10, 33, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uwazumi in view of Oka, and further in view of U.S. Patent No. 7,147,943 to Ono et al. ("Ono").

### **ARGUMENT**

*A) The rejection of claims 1, 2, 6-8, 11-14, 26, 28, 29, 31, 32, 35, 37-40, and 42 under 35 U.S.C. 103(a) predicated upon Uwazumi in view of Oka.*

The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 82 USPQ2d 1385, 1395-97 (2007) identified a number of rationales to support a conclusion of obviousness which are consistent with the proper "functional approach" to the determination of obviousness as laid down in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court emphasized that rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.

At page 7, lines 13-19, of Examiner's Answer, the reasoning for modifying Uwazumi in view of Oka is provided. It is stated, "motivation for utilizing features of Oka et al. is that it allows for producing a magnetic recording layer being free from cracks on the surface." (Emphasis added). Continuing, it is further stated, "it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified Uwazumi et al. by utilizing the features of Oka et al. because it allows for producing a magnetic recording layer being free from cracks on the surface." (Emphasis added).

According to page 6, lines 18-20, of Examiner's Answer, "sputter etching the surface of the magnetic layer" is a feature of Oka used to modify Uwazumi to purportedly show all the elements of Independent Claims 1, 26, and 32. In view of Examiner's Answer, this leads to the alleged conclusion that the feature "sputter etching the surface of the magnetic layer" allows for producing a magnetic recording layer being free from cracks on the surface.

However, Oka clearly describes the "sputter etching" feature as being "another means for forming fine projections...on the surface of the magnetic layer" (col. 11, lines 42-44) instead of being a feature which allows for producing a magnetic recording layer being free from cracks on the surface. According to col. 11, lines 42-49, of Oka, "there can be mentioned a method in which the surface of the formed magnetic layer is subjected to sputter etching. Namely, if the magnetic layer is sputtered with an argon gas or the like, the crystal grain boundary portion is selectively etched and fine projections are formed in the remaining portion." (Emphasis added).

Further, Oka specifies use of electron beam vacuum deposition, mixture ratio of oxygen gas and a gas chemically inactive in the electron beam vacuum deposition, introduction rate of the mixed gas flow, and pressure in the vicinity of the substrate as features which allow for producing a magnetic recording layer being free from cracks on the surface. (Tables 3 and 4; col. 20, line 50 to col. 22, line 43). Oka does not teach, suggest, or motivate the "sputter etching" feature as being a feature which allows for producing a magnetic recording layer being free from cracks on the surface.

As emphasized by the Court in *KSR*, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. The motivation (i.e., allows for producing a magnetic recording layer being free from cracks on the surface) for using the “sputter etching” feature of Oka to modify Uwazumi is not supported by Oka, Uwazumi, or the general knowledge in the prior art for the reasons set forth above. Since no teaching, suggestion, or motivation is provided for modifying Uwazumi by utilizing the “sputter etching” feature of Oka, it would not have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified Uwazumi in view of Oka.

Therefore, it is respectfully submitted that Independent Claims 1, 26, and 32 are patentable over the combination of Uwazumi and Oka. Accordingly, the rejections under 35 U.S.C. 103 (a) of Independent Claims 1, 26, and 32 should be reversed.

Since Independent Claims 1, 26, and 32 are patentable for the reasons set forth above, it is respectfully submitted that all claims depending from Independent Claims 1, 26, and 32 are also in condition for allowance. Accordingly, it is respectfully requested that the rejections under 35 U.S.C. 103(a) of dependent Claims 2, 6-8, 11-14, 28, 29, 31, 35, 37-40, and 42 be reversed.

*B) The rejection of claims 3, 30, and 36 under 35 U.S.C. 103(a) predicated upon Uwazumi in view of Oka, and further in view of Zou.*

On page 8 of Examiner's Answer, no reasoning is identified in Zou as supporting the modification of Uwazumi by utilizing the "sputter etching" feature of Oka. Independent Claims 1, 26, and 32 recite in part, "sputter etching". In fact, the Examiner's Answer is silent with respect to "sputter etching" in connection with Zou.

Therefore, it is respectfully submitted that Independent Claims 1, 26, and 32 are patentable over the combination of Uwazumi, Oka, and Zou for the reasons set forth above.

Since Independent Claims 1, 26, and 32 are patentable for the reasons discussed above, it is respectfully submitted that all claims depending from Independent Claims 1, 26, and 32 are also in condition for allowance. Accordingly, it is respectfully requested that the rejections under 35 U.S.C. 103(a) of dependent Claims 3, 30, and 36 be reversed.

*C) The rejection of claims 9, 10, 33, and 34 under 35 U.S.C. 103(a) predicated upon Uwazumi in view of Oka, and further in view of Ono.*

On page 8 of Examiner's Answer, no reasoning is identified in Ono as supporting the modification of Uwazumi by utilizing the "sputter etching" feature of Oka. Independent Claims 1, 26, and 32 recite in part, "sputter etching". In

fact, the Examiner's Answer is silent with respect to "sputter etching" in connection with Ono.

Therefore, it is respectfully submitted that Independent Claims 1, 26, and 32 are patentable over the combination of Uwazumi, Oka, and Ono for the reasons set forth above.

Since Independent Claims 1, 26, and 32 are patentable for the reasons discussed above, it is respectfully submitted that all claims depending from Independent Claims 1, 26, and 32 are also in condition for allowance. Accordingly, it is respectfully requested that the rejections under 35 U.S.C. 103(a) of dependent Claims 9, 10, 33, and 34 be reversed.

### **CONCLUSION**

For all of the foregoing reasons, it is respectfully submitted that the grounds of rejection of the claims on appeal are in error and should be reversed.

Please charge any additional fees or apply any credits to our PTO deposit account number: 50-4160.

Respectfully submitted,

MURABITO HAO & BARNES, LLP

Dated: 08/19/2009 /Jose S. Garcia/

Jose S. Garcia  
Registration No. 43,628

Two North Market Street, Third Floor  
San Jose, CA 95113  
(408) 938-9060